

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
5 February 2004 (05.02.2004)

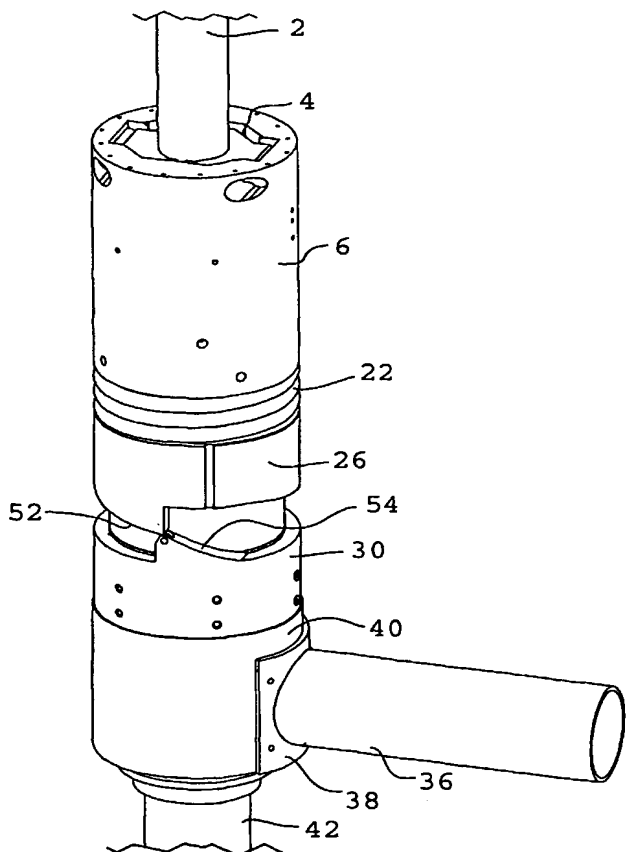
PCT

(10) International Publication Number
WO 2004/011764 A1

- (51) International Patent Classification⁷: E21B 7/20
- (21) International Application Number: PCT/CA2003/001033
- (22) International Filing Date: 17 July 2003 (17.07.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/398,990 29 July 2002 (29.07.2002) US
- (71) Applicants and
(72) Inventors: MINSHULL, Ronald, G. [CA/CA]; 31 Millcrest Road S.W., Calgary, Alberta T2Y 2K9 (CA).
MINSHULL, Brian, Richard [CA/CA]; 31 Millcrest Road S.W., Calgary, Alberta T2Y 2K9 (CA).
- (74) Agent: SMITH, Paul; Paul Smith Intellectual Property Law, Suite 330, 1508 West Broadway, Vancouver, British Columbia V6J 1W8 (CA).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: DEVICE FOR SIMULTANEOUSLY CASING A HOLE WHILE DRILLING



(57) Abstract: A driving device for installing a pipe or casing, without the use of hydraulic or pneumatic means, by capturing the rotational motion of the drill string. The driving device is placed at the top end of the pipe being (42) installed and the drill string (2) passes through the center of the device. The drill string freely rotates, advances or retracts within the driving device, until the driving device is attached (4) to the drill string when required. When the driving device is attached to the drill string, the rotational force of the drill string and any downward force applied to the drill string are captured, and used to install the pipe. The driving device uses the rotation of the drill string to impact a blow to the pipe, driving the pipe downward. The driving device uses any downward force applied to the drill string to maintain downward pressure on the pipe.

WO 2004/011764 A1